

GYULLING, V.E.

Special case of bridge location. Avt. dor. 17 no. 3:22 N-D'54.
(Bridge construction) (MIRA 8:10)

GYULLING, V.E.

CYULLING, V., inzhener.

Selecting the type of structure for spanning dry stream beds
and gullies. Avt.transp. 32 no.1:22-23 Ja '54. (MLRA 7:8)
(Bridges) (Culverts)

ALIZADE, A.S.; GYUL'MAMEDOV, B.A.; SEL'MYANSKIY, V.L.; ALIYEV, A.A.;
KEGAMYAN, V., red. izd-va; ISMAYLOV, T., tekhn. red.

[Hydroelectric power resources of the Azerbaijan S.S.R.]
Gidroenergeticheskie resursy Azerbaidzhanskoi SSR. Baku, Izd-
vo Akad. nauk Azerbaidzhanskoi SSR. Vol.2. 1961. 160 p.
(MIRA 15:3)

1. Akademiya nauk Azerbaidzhanskoy SSR, Baku. Sovet po izuche-
niyu proizvoditel'nykh sil.

(Azerbaijan--Hydroelectric power)

GYUL'MAMEDOV, I.I.

Determining the static characteristics of alternating current
Diesel-electric drive. Dokl.AN Azerb.SSR 12 no.12:949-954 '56.
(MLRA 10:8)

1.Institut energetiki Akademii nauk Azerbaydzhanskoy SSR. Predstavleno
akademikom Akademii nauk Azerbaydzhanskoy SSR M.F.Nagiyevym.
(Diesel engines) (Oil well drilling)

GYUL'MAMEDOV, I.I.

Determining the power of electric motors used for hoisting winches.
Energ. biul. no.5:1-2 My '57. (MIRA 10:6)
(Winches)

GYUL' MAMEDOV, I.I.
GYUL' MAMEDOV, I.I.

Method of calculating starting resistance of asynchronous motors
fed from autonomous generators. Izv. AN Azerb. SSR no.11:7-18
'57. (MIRA 11:1)
(Electric motors) (Electric rheostats) (Oil well drilling)

1
GYUL'NABEDOV, I.I., Cand Tech Sci--(diss) "Analytical method of
~~calculation~~ of static characteristics and transition regimes
of ~~drives~~ ^{A.C.} diesel-electric ~~operated as~~ for ~~starting~~ of petroleum well-drilling.
Baku, 1958. 14 pp (Min of Higher Education USSR. Azerbaydzhan Order
of Labor Red Banner Industrial Inst in M. Azizbekov), 100 copies
(KJ,22-58,108)

- 82 -

OSMANOV, Z.O.; GYUL'MAMEDOV, I.I.

Using a power relay for controlling the operation of deep wells
[in Azerbaijani with summary in Russian]. Azerb. neft. khoz. 37
no.7:45-46 J1 '58. (MIRA 11:9)
(Electric relays)

GYUL'MAMEDOV, I.I.

Analytical method for determining the operating possibility
of deep-bar and multiple-cage motors fed by an independent
generator. Izv.AN Azerb.SSR.Ser.fiz.-mat.i tekhn.nauk no.4:
77-81 '59. (MIRA 13:2)
(Electric motors, Induction)

Сыу L'm Amedov, I.I.

PLATE I BOOK EXTENSION 307/433

Введение в теорию автоматизированных систем управления (АУ) и автоматизированных систем управления (АСУ) производством. М., Москва, 1993

Экспертная система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

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Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

Система управления производством. М., Москва, 1993

GYUL'MAMEDOV, I.I.

Determining the switching moment and the starting stages for the
rheostat of an asynchronous motor with automatic control. Izv.
AN Azerb.SSR.Ser.fiz.-mat.i tekhn.nauk no.5:109-112 '60

(MIRA 14:4)

(Electric rheostats) (Electric motors, Induction)

GYUL'MAMEDOV, I.I.

Determining the inductive resistance of asynchronous motors. Izv.
AN Azerb. SSR Ser. fiz.-mat. i tekhn. nauk no.3:121-128 '60.

(MIRA 13:11)

(Electric motors, Induction)

GYUL'MAMEDOV, R. G.

GYUL'MAMEDOV, R. G. -- "The Creation of Forest Plantations under Conditions of the Mil'skaya Steppe of the Azerbaydshan SSR by Planting Cuttings under Irrigation." Min Higher Education USSR. Saratov Agricultural Inst. Saratov, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No 1, 1956

GYUL'MAMEDOV, R. G.

Orig. ~~BYUL~~, R. G.

USSR/Forestry - Forest Cultures.

K.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15405

Author : R.G. Gyul'mamedov

Inst : The Azerbaizhan Scientific Research Institute for
Forestry and Agricultural Forest Melioration.

Title : The Cultivation of Plantations of Rapid Growing Species
on Mil'skaya Steppe's Irrigated Soil by Graft Implan-
tation.
(Vyrashchivaniye nasazhdeniy bystrorastushchikh porod na
oroshayemykh zemlyakh Mil'skoy stepi putem posadki chere-
nkov).

Orig Pub : Byul. nauchno-tekhn. inform. Azerb. n.-i. in-ta lesn.
kh-va i agrolesomelior., 1957, No 1-2, 35-39.

Abstract : The adaptability and development of the root system in
grafts of the Canadian poplar, and hybrid poplar, the

Card 1/2

38

GYUL'MAMEDOV, R.G.

Effect of soil types on the yield of hornbeam forests in the
Greater Caucasus (Ismailly and Agdash) within the Azerbaijan
S.S.R. Izv. AN Azerb. SSR. Ser. biol. i med. nauk no.1:45-50
'64. (MIRA 17:6)

GASANOV, B.I.; GYUL'MAMEDOV, R.G.

Soil and climate conditions for the cultivation of the Amur cork
tree in the Zakataly zone. Izv. AN Azerb. SSR. Ser. biol. no.4:
91-97 '64. (MIRA 17:12)

25325

S/020/61/138/006/001/019
C111/C222

16.3500

AUTHORS: Arutyunyan, Ye.A., Gyul'misaryan, A.G., and Ovsepyan, S.G.

TITLE: Some homogeneous boundary value problems for the string vibration equation

PERIODICAL: Akademiya nauk SSSR. Doklady, v.138, no.6, 1961, 1255-1258

TEXT: In the region D with the boundary the authors consider the problem

$$u_{xx} - \lambda^2 u_{yy} = 0, \quad (1)$$

$$Lu|_r = 0, \quad (3)$$

where the operator L has the form

$$L = \sum_{i+j=0}^n c_{ij} \frac{\partial^{i+j}}{\partial x^i \partial y^j}; \quad (4)$$

here c_{ij} are constants, $c_{00} \neq 0$, and n is a natural number. A number λ for which there exists a function $u_\lambda(x,y)$ satisfying (1), (3), and $Lu_\lambda(x,y) \neq 0$, is called an eigenvalue of (1), (3).

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Some homogeneous boundary value problems... S/020/61/138/006/001/019
C111/C222

Theorem 1: Let D be the circle $x^2 + y^2 = 1$. Then the eigenfunctions of (1), (3) are complete in $L_2(D)$.

Theorem 2: Let the region D be the circle $x^2 + y^2 \leq 1$. Let $c \neq 0, -1, \dots, -k, \dots$. Then the eigenvalues of (1) with

$$u|_r = 0 \quad (2)$$

are also eigenvalues of (1) with

$$L_1 u|_r = \left[cu + \frac{\partial u}{\partial n} \right]_r = 0. \quad (3^*)$$

The eigenfunctions of (1)-(3^{*}) are complete in D in the class of continuous functions in the sense of the uniform convergence.

An analogous theorem holds for the boundary condition

$$L_1^* u(x, y)|_r = \sum_{i=0}^n c_i \frac{\partial^i u(x, y)}{\partial n^i} \Big|_r = 0 \quad (n \geq 1),$$

if the expression

$$c_0 + kc_1 + k(k-1)c_2 + \dots + \frac{k!}{(k-n)!} c_n$$

Card 2/3

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Some homogeneous boundary value problems... S/020/61/138/006/001/019
C111/C222

for all $k = 0, 1, 2, \dots$ is different from zero.

The authors mention R.A.Aleksandryan whose paper (Ref.2: DAN 73, no.5 (1950)) is essentially used for the proof of the theorems. There are 3 Soviet-bloc references.

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk Arm SSR (Computing Center of the Academy of Sciences Armyanskaya SSR)

PRESENTED: February 15, 1961, by S.L.Sobolev, Academician

SUBMITTED: December 27, 1960

X

Card 3/3

L 10903-66 EWT(d) LJP(c)

ACC NR: AP600/499

SOURCE CODE: UR/0022/65/018/001/0014/0023

44,55
AUTHOR: Gyul'misaryan, A. G.

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: General boundary value problems for parabolic equations with discontinuous coefficients
16, 44, 55

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 1, 1965, 14-33

TOPIC TAGS: boundary value problem, parabolic differential equation, existence theorem, uniqueness theorem, isomorphism, mathematic space, elliptic differential equation, operational calculus

ABSTRACT: The article proves a theorem for the existence and uniqueness in spaces $E_1, 1/2b$ of a stationary (elliptic) problem and then, using the isomorphism of spaces $E_1, 1/2b$ and $P_1, 1/2b$, obtains the single-valued solvability of a parabolic problem in spaces $P_1, 1/2b$. The solvability of the elliptic problem is proved in general as follows: proof of the a priori evaluation and existence is first given for the case of homogeneous operators A^i, B_j, C_j, R_j with constant coefficients in a half-space; then these results are applied to the case of operators with slightly-changing coefficients, and a final result is obtained for operators with variable coefficients. The methods used by the author are

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L 10903-66

ACC NR: AP6004499

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similar to methods previously developed by M. S. Agranovich and M. I. Vishik. The author dwells in detail on the case in which the coefficients of the operators of the elliptic problem are constant, the operators themselves are homogeneous, and the boundary conditions are given in the hyperplane $x_n = 0$. The author thanks Professor M. I. Vishik for raising problems and for valuable instruction. Orig. art. has: 54 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 24Apr64 / ORIG REF: 011

BC
Card 2/2

L 63324-65 BRT/EDD-2/INT(d)/T/EMP(1) Pg-4/Pk-4/Pg-4 L.F.(c) CG/BR
 ACCESSION NR: AP5017615 UR/2582/65/000/01/0267/0287

45
403

AUTHOR: Grigoryan, V. M. (Yerevan); Gyul'misaryan, S. A. (Yerevan); Dzhanyaladze, T. K. (Yerevan); Yedigaryan, A. P. (Yerevan); Maliyan, A. N. (Yerevan); Mkhitarjan, S. G. (Yerevan); Papyan, B. K. (Yerevan); Pogosova, S. S. (Yerevan); Fel'dman, Ye. D. (Yerevan)

TITLE: An algorithm for Armenian-Russian machine translation. III. (Grammatical rules and the order of their application)

SOURCE: Problemy kibernetiki, no. 14, 1965, 267-287

TOPIC TAGS: translation algorithm, machine translation, syntactic analysis, syntactic synthesis

ABSTRACT: This is the third part of a comprehensive description of an algorithm for Armenian-Russian machine translation (for the first two parts see Problemy kibernetiki, no. 14, 1965, 221-244 and 245-266). The translation process follows four separate steps: morphological analysis, syntactic analysis, syntactic synthesis, and morphological synthesis. In this part, the authors present a complete description of all the grammatical rules used for the establishment of the syntactic analysis and the syntactic synthesis, and discuss the order in which

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ACCESSION NR: AP5017615

these rules must be applied. "The authors thank M. I. Beletskiy, R. A. Bagmid-
zhyan, E. P. Gabrielyan, T. V. Karayatsyan, and particularly T. M. Ter-
Mikaelyan for their substantial help during the work." Orig. art. has: 4
formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 23Mar64

ENCL: 00

SUB CODE: DP

NO REF SOV: 002

OTHER: 001

Card

2/2

L 63328-65 EWT(d)/T Pg-4/Ph-4 IJP(c)

UR/2582/65/000/014/0221/0244

ACCESSION NR: AP5017613

AUTHOR: Bazmadzhyan, R. A. (Yerevan); Baletskiy, M. I. (Yerevan); Grigoryan, V. M. (Yerevan); Gyul'misaryan, S. A. (Yerevan); Karapetayan, T. V. (Yerevan); Maksadyan, L. S. (Yerevan); Pogosova, S. S. (Yerevan); Ter-Mikaelyan, T. M. (Yerevan); Fel'dran, Ye. D. (Yerevan)

TITLE: An algorithm for Armenian-Russian machine translation. I (General description)

SOURCE: Problemy kibernetiki, no. 14, 1965, 221-244

TOPIC TAGS: translation algorithm, machine translation, syntactic analysis, syntactic synthesis, idiom identification

ABSTRACT: The algorithm for Armenian-Russian machine translation whose general description is presented in this article is based on the principle of independent analysis and synthesis. This means that during the first stage of the operation the machine carries out the grammatical and meaning analysis of the Armenian text while during the second it synthesizes the corresponding Russian text on the basis of the information gathered during the analysis. The authors outline the structure of the dictionary and the method of morphological synthesis of the Russian sen-

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ACCESSION NR: AP5017613

tence and describe the labels used by the algorithm during the syntactic analysis and label synthesis. They also describe procedures for arriving at the correct meaning of multiple meaning words and for the identification of idioms. The article concludes with four examples of translation of mathematical texts. "The authors thank Y. V. Ivanov, O. S. Kulagina, I. A. Mel'chuk, T. N. Moloshnaya and V. A. Uspenskiy for their help, fruitful ideas and valuable advice." Orig. art. has: 13 formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 23Jan64

NO REF SOV: 011

ENCL: 00

SUB CODE: DP

OTHER: 000

Card

2/2

BAZMADZHIAN, R.A. (Yerevan); BELETSKIY, M.I. (Yerevan); GRIGORYAN, V.M. (Yerevan); GYUL'MISARYAN, S.A. (Yerevan); KARAUSTAYAN, T.V. (Yerevan); MAKSUDYAN, L.S. (Yerevan); POGOSOVA, S.S. (Yerevan); TER-MIKAELYAN, T.M. (Yerevan); FEL'DMAN, Ye.D. (Yerevan)

Algorithm for Armenian-to-Russian machine translating. Part 1:
General description. Probl. kib. no.14:219-244 '65.

(MIRA 19:1)

1. Submitted Jan. 23, 1964.

ABAYEVA, B.T.; AGAFONOV, A.V.; GILYAZETDINOV, L.P.; GYUL'MISARYAN, T.G.;
ZUYEV, V.P.; MOROZOV, V.I.

Testing thermocatalytic gas oil in the production of furnace black.
Nefteper. i neftekhim. no.12:17-19 '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

ZUYEV, V.P.; GILYAZETDINOV, L.P.; GYUL'MISARYAN, T.G.; BERNSHTEYN, I.D.;
SAULINA, V.V.; MAGARIL, R.Z.; SEREBRYAKOV, K.F.; BOPSHCHEV, B.S.

Extracts of catalytic gas oils as raw stock for the production
of furnace black. Khim. i tekhn. topl. i masel 9 no.12:6-11 D '64.
(MIRA 18:2)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti,
Omskiy nauchno-issledovatel'skiy konstruktorskogo-tekhnologicheskoy
institut shinnoy promyshlennosti, Omskiy sazhevyi zavod i
Kudinovskiy sazhevyi zavod.

2 43268-65 EWT(m)/EWP(t)/EWP(b) IJP(o) JD

ACCESSION NR: AP5007171

S/0206/65/000/003/0041/0041

AUTHOR: Lebedev, Ye. V.; Sklyar, V. T.; Perskrest, A. N.; Gordash, Yu. T.;
Zakupra, V. A.; Kel'chenko, V. M.; Gyul'misaryan, T. G.

TITLE: A method for producing highly aromatized material for making carbon black.
Class 23, No. 167933

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 41

TOPIC TAGS: carbon black, aromatic compound

ABSTRACT: This Author's Certificate introduces a method for producing highly aromatized material for the production of carbon black. The material is made from petroleum byproducts by using redistillation to isolate the hydrocarbon fraction which contains the aromatic compounds. This fraction is then extracted by furfural or phenol. In order to provide a wider choice of materials, coke distillate is used as the petroleum byproduct. The 240-460°C fraction is isolated from the distillate.

ASSOCIATION: none

Card 1/2

GYUL'MISARYAN, T.G.; FEL'DMAN, V.M.; GILYAZETDINOV, L.P.

Effect of coking properties of raw materials on the properties
of furnace black. Nefteper. i neftekhim. no.5:29-32 '65.

(MIRA 18:7)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

LO9905-66 EWT(m)/EPF(c)/EMP(j) RM

ACCESSION NR: AP5016635

UR/0138/65/000/006/0019/0024
678.046.2.002.2.001.4 23

AUTHORS: Zuyev, V. P.; Gilyazetdinov, L. P.; Gyl'misaryan, T. G.; Safronov, N. B.
Ya.; Vernshteyn, I. D.; Glagolev, V. I.; Taygankova, E. I.; Sokolova, V. V.;
Bystrov, K. M.; Khokhlov, B. P.

TITLE: Some peculiarities of the production of carbon black PM 70 in cyclone-type reactors by using thermocatalytic gas oil

SOURCE: Kauchuk i rezina, no. 6, 1965, 19-24

TOPIC TAGS: gas oil fraction, carbon black, catalytic cracking / PM 70 carbon black

ABSTRACT: The production of active carbon black PM-70 from a 1:1 mixture of thermocatalytic gas oil and green oil was investigated to correct certain technological parameters and to determine the behavior of carbon black during its recovery and processing. The tabulated physico-chemical properties of green oil, and their mixture show that the thermocatalytic gas oil is distinguished by a high polycyclic aromatic hydrocarbon content. The analysis of several gas oil fractions showed that its kinematic viscosity at 50C varies over a range of

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ACCESSION NR: AP5016635

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$9.5-11.8 \times 10^{-2} \text{ m}^2/\text{sec}$. The viscosity of the 1:1 mixture varies from 3.6 to $3.9 \times 10^{-2} \text{ m}^2/\text{sec}$. The kinematic viscosity plotted against heating temperature shows that the green oil and gas oil have the same viscosity only at a temperature of 280-300C. The viscosity value of $1.05 \times 10^{-2} \text{ m}^2/\text{sec}$ is reached for green oil only at 100C, and for gas oil and green oil mixture at 140C. Pure gas oil has this viscosity at 185C. The high viscosity, high boiling point, and the wide fractional composition of the gas oil make it necessary to preheat it by 80-100C higher than the green oil at minimum 160C before its introduction into the reactors. The average diameter of the droplet of raw material is plotted against the vaporizing air flow rate and the temperature before the atomizer. With an increase in the air flow rate from 0.45 to 1.0 m^3/kg , the diameter of the droplet decreased 2.0-2.2 times. During the experiments the gas oil content in the mixture, the heating temperature, and the specific flow rate of vaporizing air were varied. The other technological parameters were almost constant (total specific air flow rate of 4.8-5.1 m^3/kg , gas flow rate of 0.25-0.28 m^3/kg of raw material, reactor temperature of 1395-1400C). Tabulated data show that by increasing the air flow rate and temperature the specific surface and the oil content of carbon black were increased, while the optical density of the benzene extract of carbon black decreased. The technological data and properties of carbon black PM-70

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ACCESSION NR: AP5016635

are tabulated and discussed. It was established that the carbon black yield is almost the same as that obtained from pure green oil. The thermophysical properties of the gaseous reaction products of carbon black formation are compared. Vulcanizates obtained with PM-70 carbon black have a higher tear strength due to the larger specific surface and oil content. Experimental data show that a carbon black plant equipped with cyclone-type reactors and a dry system of carbon black recovery can be altered to use a mixture of gas oil and green oil. An increase in the vaporizing air flow rate leads to an increased dispersal and oil content of PM-70 carbon black and to the decrease in coking of reactors. It is recommended to increase the air flow rate to 1.0 m³/kg oil. The addition of gas oil to green oil results in the stabilization of the granulation operation on the ASA 1 drums. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute for the Tire Industry); Novo-Yaroslavskiy sazhevy zavod (Novo-Yaroslavl Carbon Black Plant)

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, GC

NO REF SOV: 005

OTHER: 001

Card 3/3 SP

L 12807-66 EWT(m)/EWP(j)/EWP(t)/EWP(b) IJP(c) JD/RM

ACC NR: AP5028680

SOURCE CODE: UR/0318/65/000/011/0025/0026

AUTHOR: Gyul'misaryan, T. G.; Gilyazetdinov, L. P.; Aksenova, E. I.; Shmeleva, R. I.; Khokhlov, B. P.; Bystrov, K. M.; Sokolova, V. V.; Sinyakina, A. V.; Abayeva, B. T.; Okinshevich, N. A. 39
B

ORG: NIISHP; VNIINP: Novo-Yaroslavl Carbon Black Plant (Novo-Yaroslavskiy sazhevyy zavod); Volgograd Carbon Black Plant (Volgogradskiy sazhevyy zavod); Scientific Research Technological Design Institute (Nauchno-issledovatel'skiy konstruktorno-tekhnologicheskiy institut)

TITLE: Industrial tests of new types of petroleum stock in the production of activated PM-70 furnace black ↙ ↘

SOURCE: Neftepererabotka i neftekhimiya, no. 11, 1965, 25-28

TOPIC TAGS: activated carbon, petroleum product, gas oil fraction, phenol

ABSTRACT: In order to confirm and develop the results of earlier studies which indicated that catalytic and thermal gas oil could be used in the production of activated furnace black, experimental batches of initial sulfur and hydrofined phenol extracts of catalytic and thermal gas oil were produced. The physicochemical characteristics of the new types of petroleum stock are compared with those of green oil; in the degree of aromatization they are identical, but in fractional composition, molecular weight, and viscosity, green oil is slightly lighter. Industrial tests confirmed that hydrofined phenol extracts of catalytic gas oil, the Card 1/2

UDC: 66.095.21:547.21.001.5

L 12807-66

ACC NR: AP5028680

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initial sulfur-containing phenol extract of catalytic gas oil, and also mixtures of thermal gas oil and green oil (in the ratio of 60:40) can be used in the production of activated FM-70 furnace black in plants equipped with cyclone reactors, a dry system being used for trapping the black. Orig. art. has: 2 figures and 3 tables.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 006

jw
Card 2/2

L 43771-66 EWT(m)/EWP(i)/EWP(t)/ETI IJP(e) ID/RN
ACC NR: AP6015643 (A) SOURCE CODE: UR/0413/66/000/009/0054/0054

INVENTOR: Gyul' misaryan, T. G. ; Gilyazetdinov, L. P. ; Azhishchev, A. F. ;
Zavidov, V. I. 34
B

ORG: none 21 ✓

TITLE: Method of obtaining furnace carbon black. Class 22, No. 181215
[announced by Scientific Research Institute of the Tire Industry (Nauchno-issledovatel' skiy institut shinnoy promyshlennosti)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966,
54

TOPIC TAGS: hydrocarbon, carbon black, furnace ~~carbon black~~

ABSTRACT: An Author Certificate has been issued for a method of obtaining a
furnace carbon black by decomposing liquid hydrocarbon raw material at 1100—
1600C using haloid-containing components. To improve the properties of carbon
black, the haloid-containing components are added to the raw materials prior to
decomposition. Oil distillates are suggested as the hydrocarbon raw material for
decomposition. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 07Dec63/

UDC: 678.046.2

Card 1/1 AM 07/

ALCHUDZHAN, A.A.; GYUL'ZADYAN, A.A.; MESROPYAN, K.G.; ASHIKYAN, M.A.

Chemical treatment of the tailings of Svava iron-olivinite ore obtained by magnetic separation dressing. Part 3: Treatment of hydrochloric solutions of ammonium magnesium tailings by the carbonate method. Izv. AN Arm. SSR. Khim. nauki 18 no.3: 313-324. '65. (MJRA 18:11)

1. Yerevanskiy politekhnicheskoy institut imeni Karla Marksa, kafedra obshchey i analiticheskoy khimii. Submitted May 9, 1964.

BABAYAN, G.G.; SAYAMYAN, E.A.; GYUNASHYAN, A.P.; OGANESYAN, E.B.; VOSKANYAN, S.S.

Solubility in the system $K_2SiO_3 - K_2CO_3 - H_2O$ at and $20^{\circ}C$. Izv. AN Arm.SSR. Khim.nauki. 16 no.3:221-228 '63. (MIRA 17:2)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.

S/190/61/003/004/001/014
B101/B207

AUTHORS: Dogadkin, B. A., Dobromyslova, A. V., Belyatskaya, O. N.,
Gyul'-Nazarova, T. A.

TITLE: Study of the early vulcanization (scorching) of rubber mix-
tures. 1. Structural changes of non-filled and filled mix-
tures when heated

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961,
497-504

TEXT: The present study deals with the structural changes occurring in the
scorching of rubber mixtures as well as with the effect of various factors
upon this process. The investigation was conducted by means of a plasto-
meter of the NIIShP (Scientific Research Institute of the Tire Industry) at
120°C. The mixtures were heated in the plastometer for seven minutes and
then, at constant pressure, pressed through a capillary; every two minutes,
the quantity leaving the capillary was weighed. The moment at which no more
mixture left the capillary, was defined as scorching point. Preliminary
tests proved that the data obtained by means of the plastometer are in good

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agreement with those obtained by the BP-1 (VR-1) viscosimeter. Moreover, the kinetics of sulfur addition and the change of the solubility in benzene were tested. A) Non-filled mixtures. The experiments were made with a mixture of (in weight %) 100 CKC-30A (SKS-30A) rubber, 3 sulfur, 1.2 N,N-diethylbenzothiazyl sulfenamide, 1.2 dibenzothiazyl disulfide; 2 zinc oxide, 2.0 stearic acid. Fig. 1 shows the results obtained. The curve of S addition does not go through the origin of coordinates, since the initial rubber contains already 0.2% S. In the scorching point, the S addition amounts to about 0.5%. B) Filled mixtures. Carbon black served as filler. The mixture consisted of (in weight %) 100 SKS-30A rubber, 3.0 sulfur, 1.2 sulfenamide ET (BT), 1.2 altax, 5.0 ZnO, 1.0 colophonium, 3.0 rubrax, 1.0 stearic acid, 5.0 polydienes, 40 spray burner black, 15.0 carbon black. The results are listed in Fig. 2. In the presence of highly surface-active carbon black, the scorching point occurred already after the addition of 0.25-0.30% sulfur, while in the presence of coarse-disperse carbon black, 0.4-0.5% S is added. C) The authors studied the effect exerted by various types of carbon black the properties of which are listed:

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Table 1.

Type of carbon black	pH of the carbon black suspension in water-alcohol mixture	specific surface m ² /g	scorching time min
Carbon black	3.2 - 3.3	90	94
Carbon black, reduced	8.4 - 8.6	-	62
Chimney soot	8.0 - 8.2	30	62
Chimney soot oxidized	6.2 - 6.4	-	98
Spray burner black	7.4 - 7.6	25	70
Thermal carbon black	7.4 - 7.6	15	76

Fig. 4 shows the effect of the pH of carbon black upon the sulfur addition. The effect of the degree of dispersion of carbon black manifested itself by the fact that carbon black, already when masticated with rubber, forms rubber - black gel (approximately 42%), while in the case of coarse-disperse

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chimney soot this effect was not observed. Heating of carbon black in N₂ to eliminate the oxygen-containing groups, had no effect upon this phenomenon, led, however, due to the pH increase, to a quicker sulfur addition. The network formation with fine-disperse carbon black was also observed in mixtures with natural rubber. Thus, scorching is caused by interaction of rubber with sulfur and other vulcanizing substances. The only means of a successful elimination is an inhibition of the mentioned processes. V. A. Zhukova participated in the experiments. There are 6 figures, 2 tables, and 14 references: 2 Soviet-bloc and 12 non-Soviet-bloc. The 2 references to English language publications read as follows: M. L. Studebaker, L. G. Nabors, Rub. Age 80, 5, 837, 1957; W. H. Watson, Industr. and Engng. Chem. 47, 1281, 1955.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov). NII shinnoy promyshlennosti (Scientific Research Institute of Tire Industry)

SUBMITTED: June 10, 1960

Card 4/7

ABAYEVA, B.T.; OKINSHEVICH, N.A.; AGAFONOV, A.V.; SIDLYARENOK, F.S.;
KAZANSKIY, V.L.; GYUL'MISAR'HAN, T.G.; SUYETENKO, L.P.;
GILYAZETDINOV, L.P.

Using extracts as stock for the production of active and semi-active carbon black. Nefteper. i neftekhim. no.5:30-33 '64.

(MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva,
Kuybyshevskiy nauchno-issledovatel'skiy institut neftyanoy
promyshlennosti i Nauchno-issledovatel'skiy institut shinnoy
promyshlennosti.

DOGADKIN, B.A.; DOBROMYSLOVA, A.V.; BELYATSKAYA, O.N.; GYUL'-NAZAROVA, T.A.

Investigation of the premature vulcanization (scorching) of rubber mixtures. Part 1: Structural changes in unfilled and filled mixes during heating. Vysokom.soed. 3 no.4:497-504 Ap '61.

(MIRA 14:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Vulcanization)

GYUL'NAZARYAN, A.

Improve industrial planning. Prom.Arm. 5 no.12:5-9 D '62.(MIRA 16:2)
(Armenia—Industrial organization)

GYUL'NAZARYAN, I.M.; ZHEBROVSKAYA, I.F.

Role of psychogenia in the etiology of mental disorders in cerebral atherosclerosis. Trudy Gos. nauchno-issl. inst. psikh. 22p98-107 '60. (MIRA 15:1)

1. Klinika sosudistyykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiiatrii Ministerstva zdravookhraneniya RSFSR i Tambovskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach - zasluzhennyy vrach RSFSR A.M. Pisharitskaya).

(CEREBRAL ARTERIOSCLEROSIS)
(MENTAL DISORDERS)

GYUL'NAZARYAN, I.M.; ZHEBROVSKAYA, I.F.

Study of heredity in patients with cerebral atherosclerosis. Trudy
Gos. nauchno-issl. inst. psikh. 22:108-116 '60. (MIRA 15:1)

1. Klinika sosudistyykh psikhozov (zav. - prof. V.M.Banshchikov)
Gosudarstvennogo nauchno-issledovatel'skogo instituta psikiatrii
Ministerstva zdravookhraneniya RSFSR i Tambovskaya psikhonevrologiche-
skaya bol'nitsa (glavnyy vrach zasluzhennyy vrach RSFSR A.M.
Pisarnitskaya).

(CEREBRAL ARTERIOSCLEROSIS)

(HEREDITY OF DISEASE)

ALCHUDZHAN, A.A.; GYUL'ZADYAN, A.A.; MESROPYAN, K.G.; ASHIKYAN, M.A.

Chemical treatment of tailings of Svarantsk iron-olivinite ores obtained by the concentration by magnetic separation. Part 2: Solubility of tailings in sulfuric and nitric acids. Izv. AN Arm.SSR. Khim.nauki 18 no.1:96-103 '65.

(MIRA 18:5)

1. Yerevanskiy politekhnicheskii institut imeni Karla Marksa, kafedra obshchey khimii.

Symonovskaya, I

REEV, P.

BURMA (in case); Given Name

Country: Bulgaria

Academic Degree: not indicated

Affiliation: not indicated

Source: Sofia, *Khizina*, No 2, Mar/Apr 61, pp 27-28

Date: "Salmonellae Biepebjerg, Salmonellae Senftenberg and
Salmonellae Richmond Have Been Separated in Bulgaria."

Co-authors:

APOSTOLOV, P.

MANDULOV, V.

SYMONOVSKAYA, O.

3

BABAYAN, G.G.; GYUNASHYAN, A.P.

Thermographic study of some sodium and potassium metasilicates.
Izv.AN Arm.SSR. Khim.nauki 16 no.4:327-334 '63. (MIRA 16:9)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.

BABAYAN, G.G.; OGANEZ'YAN, E.B.; GYUNASHYAN, A. A.; DAYANYAN, N.A.

Solubility diagram of the system $\text{NaOH} - \text{KOH} - \text{H}_2\text{O}$ at 0 and 20°C. Izv. AN Arm SSR. Khim. nauki 16 no.6:539-545 '63. (MIRA 17:8)

1. Institut khimii Gosudarstvennogo komiteta tsvetnykh i chernykh metallov SSSR.

NIKOLOV, G.S.; GYUNCHEV, K. (gorod Svishchov, Bolgariya)

Rare case of acute lymphogranulomatosis. Arkh. pat. no. 12:65-68
'63. (MIRA 17:11)

1. Iz Ob"yedinennoy gorodskoy bol'nitsy (glavnyy vrach - doktor
Nedelya Vodenicharova), gorod Svishchov, Bolgariya.

AUTHORS: Danil'chenko, P. T., Gyunner, E. A., 78-3-6-18/30
Markina, T. D.

TITLE: Refractometric Investigations of the Reactions in
Solutions (Refraktometricheskoye issledovaniye reaktsiy v
rastvorakh)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6,
pp. 1398-1402 (USSR)

ABSTRACT: Reactions in aqueous solutions may occur as exchange-or
reduction-oxidations, or accompanied by the formation of
complexes. The changes of the refractive index may also
take place with these reactions. The analyses taking
account of the change of the refractive index, are
described as refractometric methods.
Refractometric investigations comprise three types of
reactions:
a) reciprocal exchange, without change of the number of
ions in the solution;
b) reciprocal exchange, accompanied by a reduction of the
number of ions in the solution;

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Refractometric Investigations of the Reactions in
Solutions

78-3-6-18/30

- c) reciprocal exchange, accompanied by a change of the ionic charge without change of the number of ions in the solution.

Typical examples were given and the corresponding refractograms of these reactions were recorded.

The complex formation in the solution may be determined by refractometric methods. It was shown that conclusions with respect to the quantitative character of the reactions can also be drawn by the refractometric investigations with each reaction of interaction, accompanied by a decrease of the ionic number or according to the change of the ionic charge.

There are 2 figures, 2 tables, and 4 references, 3 of which are Soviet.

SUBMITTED: April 8, 1957

AVAILABLE: Library of Congress

Card 2/2

- | | |
|----------------------------------|----------------------------------|
| 1. Solutions--Chemical reactions | 2. Refractometers--Application |
| 3. Exchange reactions--Analysis | 4. Oxidation-reduction reactions |
| --Analysis | |

5(4)

AUTHOR:

Gyunner, E. A.

SOV/76-33-3-28/41

TITLE:

An Equation for the Density of Binary Aqueous Solutions
(Uravneniye plotnosti dvoynykh vodnykh rastvorov)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 683-687
(USSR)

ABSTRACT:

An empirical equation for the density of binary aqueous solutions was established by the statistical method for the evaluation of checking data (Ref 9). The author checked solutions of 165 compounds, four of them being nonelectrolytic. The equation is expressed as follows: $d = d_0 - \ln [1 - B(p) p]$ (1), where d and d_0 = density of the solutions and the solvent, p = weight percentage of the dissolved substance, $B(p)$ = "function of density". Function $B(p)$ can represent a straight line or a "broken" straight line: $B(p) = B(0) + \beta p$ (2); $B(0)$ and β = coefficients which are empirically determined for each dissolved substance. The values of d in NaJ- and KHS solutions obtained by the aforesaid equation (Tables 1,2) agree well with experimental values. Solutions in which $B(p)$ is represented by a straight line are named

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SOV/76-33-3-28/41

An Equation for the Density of Binary Aqueous Solutions

"solutions of the first type" (comprising 65 of the solutions under investigation, among them KCN (Fig 2), $K_2Cr_2O_7$, NaCNS, NaJ, etc); "solutions of the second type", in which $B(p)$ is represented as a broken straight line, may be divided into two groups: the straight line consists of rectilinear sections (Fig 3) (which holds for 94 of the investigated substances), or the straight line includes a curved section ($Cr_2(SO_4)_3$, H_2SeO_4 , HNO_3 , H_3PO_4 , KH_2PO_4 , and $ZnCl_2$). The breaks of the isothermal line $B(p)$ for HCl solutions and K_2CO_3 solutions (Fig 4) correspond to the hydrates $HCl \cdot 18H_2O$ ($p = 0.101$), $HCl \cdot 6H_2O$ ($p = 0.252$), and $K_2CO_3 \cdot 18H_2O$ ($p = 0.299$). Further, they are not shifted by temperature change, while the breaks of the isothermal line $B(p)$ for the solutions of LiCl, NaCl, and $NaNO_3$ are shifted by rising temperature toward lower concentrations. It is assumed that water is capable of forming two types of hydrates, comparatively stable and unstable ones. There are 5 figures, 2 tables, and 12 references, 7 of which are Soviet.

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An Equation for the Density of Binary Aqueous Solutions

SOV/76-33-3-28/41

ASSOCIATION: Krymskiy pedagogicheskiy institut im. M. V. Frunze, Simferopol'
(CrimeanPedagogical Institute imeni M. V. Frunze, Simferopol')

SUBMITTED: August 23, 1957

Card 3/3

S/078/61/006/001/017/019
B017/B054

AUTHOR: Gyunner, E. A.

TITLE: Study of the Interaction of Beryllium Sulfate With Urea and Thiourea by the Method of Physicochemical Analysis

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 1, pp. 236 - 238

TEXT: The author studied the systems $\text{BeSO}_4 - \text{H}_4\text{N}_2\text{CO} - \text{H}_2\text{O}$ and $\text{BeSO}_4 - \text{H}_4\text{N}_2\text{CS} - \text{H}_2\text{O}$ physicochemically by determining density, refractive index, and specific electrical conductivity. The isothermal lines of refractive index, viscosity, specific electrical conductivity, and density are graphically shown in Figs. 1 and 2. A molecular compound of the composition $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CO}$ was established in the system $\text{BeSO}_4 - \text{H}_4\text{N}_2\text{CO} - \text{H}_2\text{O}$. The molecular compound $\text{BeSO}_4 \cdot \text{H}_4\text{N}_2\text{CS}$ was isolated in the system $\text{BeSO}_4 - \text{H}_4\text{N}_2\text{CS} - \text{H}_2\text{O}$. There are 2 figures and 9 references:

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Study of the Interaction of Beryllium Sulfate With Urea and Thiourea by the Method of Physicochemical Analysis S/078/61/006/001/017/019 B017/B054

6 Soviet, 1 French, 1 German, and 1 Indian.

ASSOCIATION: Krymskiy gosudarstvennyy pedagogicheskiy institut im. M. V. Frunze (Crimean State Pedagogical Institute imeni M. V. Frunze)

SUBMITTED: February 20, 1960

Card 2/2

GYUNNER, E.A.

Molecular compounds of urotropine. Part 1: Molecular compounds of urotropine with certain organic acids in aqueous solutions. Zhur. ob khim. 31 no.2:354-358 F '61. (MIRA 14:2)

1. Krymskiy gosudarstvennyy pedagogicheskiy institut imeni M.V. Frunze.

(Hexamethylenetetramine)

GYUNNER, E.A.

Study of complex formation in the system $\text{BeSO}_4 - \text{CH}_3\text{CONH}_2 - \text{H}_2\text{O}$
by physicochemical analytical methods. Zhur.neorg.khim. 7
no.6:1431-1433 Je '62. (MIRA 15:6)

1. Krymskiy pedagogicheskiy institut imeni M.V.Frunze.
(Beryllium sulfate) (Acetamide) (Complex compounds)

GYUNNER, E.A.

Complex formation in the system silver nitrate - urotropine - water.
Zhur.neorg.khim. 8 no.2:423-427, P. '63. (MIRA 16:5)

1. Krynskiy pedagogicheskiy institut imeni M.V.Frunze.
(Silver nitrate) (Hexamethylenetetramine)

GYUNNER, E.A.

Refractometry of complex-forming reactions in aqueous solutions.
Zhur. neorg. khim. 8 no.10:2334-2340 0 '63. (MIRA 16:10)

(Complex compounds) (Refractometry)

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Complex formation in the system silver nitrate - urotropine -
methanol. Zhur. neorg. khim. 9 no.5:1297-1298 My '64.
(MIRA 17:9)

1. Krymskiy pedagogicheskiy institut imeni M.V. Frunze.

GRUNNER, E.A.; MEL'NICHENKO, L.M.

Reaction of mercury halides with urotropine in aqueous and methanol solutions. Ukr. khim. zhur. 31 no.6:632-633 '65. (MIRA 18:7)

1. Krymskiy pedagogicheskii institut imeni Frunze.

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Types of refractograms in the investigation of reactions in the systems electrolyte I - electrolyte II - water and electrolyte - nonelectrolyte - water according to the continuous measurement method. Zhur. ob. khim. 35 no.10:1695-1702 O '65.
(MIRA 18:10)

1. Krymskiy pedagogicheskiy institut imeni M.V. Frunze.

STRELAIA, U.I.; GYUNNER, E.A.; ORIYANSKAYA, A.K.; IUGANOVA, T.V.

Reaction of silver nitrate with thiourea and allylthiourea in
methanol solutions. Zhur. neorg. khim. 10 no.5:1273-1280 My '65.
(MIRA 18:6)

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Refractometry of precipitation reactions in the systems A - B - D H_2O .
Zhur. neorg. khim. 10 no.9:2175-2179 S '65. (MIRA 18:10)

1. Krymskiy pedagogicheskiy institut imeni Frunze.

GYUNNER, E.A.; MEL'NICHENKO, L.M.

Urotropine compounds with silver chromate. Zhur. neorg. khim.
10 no.12:2606-2610 D '65. (MIRA 19:1)

1. Krymskiy pedagogicheskiy institut imeni Frunze.

Gyunninen, E. M.

GYUNNINEN, E. M.

"Electromagnetic and Acoustic Waves in Mediums Bounded
by Parabolic Surfaces." Leningrad Order of Lenin State U imeni A. A.
Zhdanov, Leningrad, 1955. (Dissertation for the Degree of Candidate
in Physical and Mathematical Sciences)

SO: M-955, 16 Feb 56

29589 S/108/61/016/011/005/007
D201/D304

9.3260 (1139, 1159)

AUTHORS: Gyunninen, E.M., Zanadvorov, P.N., Kotik, I.P., and
Makarov, G.I.

TITLE: The effect of a complex shape periodic signal on a
free-running oscillator

PERIODICAL: Radiotekhnika, v. 16, no. 11, 1961, 39 - 44

TEXT: The pure theory of phasing of oscillators presents difficulties which make the solutions of its problem practically impossible. In the present article, the author considers the solution of this problem in its numerical context, by means of a fast electronic computer. Such a problem, as opposed to the purely analytical one, is stated to be comparatively easy, but the quasilinear method of analysis is applied for simplification and numerical substitution of the equation of the oscillator, upon which acts the external force $A(\tau)$. If x is the voltage at the grid, reduced to the amplitude x_m of the steady state oscillations at the grid, ω_0 and δ - the frequency and attenuation of the oscillating circuit, $\tau = \omega_0 t$ - dimensionless time.

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The effect of complex shape ...

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sionless time; $\bar{S}_0$ - average reduced slope of the valve. μ , γ , S_0 , and β - constants, then the fundamental equation may be represented as

$$\frac{d^2x}{d\tau^2} + x = -\mu \left\{ \delta - M\omega_0 S_0 \left[1 - \frac{2}{\pi} \arctg \beta x_m \right] \right\} \frac{dx}{d\tau} + \gamma A(\tau). \quad (3)$$

Practical values are now assigned to the parameters of (3) thus:

$\delta = 0.8$; $M\omega_0 S_0 = 1.12$; $\beta = 0.422$; $\mu = 10^{-2}$ and 10^{-3} , $\gamma = 0.1$ and 0.01 are the values resulting from practical assessment of the valve parameters and regime. The acting force has been taken as having the form of consecutive "distorted sinusoidal pulses" $A(\tau)$ with linear variation of amplitude and initial phase. Thus $A(\tau)$ had the form of

$$A(\tau) = \begin{cases} 0.08(\tau + 3) \cdot \sin[\tau(0.8 + 0.02\tau)], & 0 < \tau < \tau_k, \\ 0, & \begin{cases} \tau < 0, \\ \tau > \tau_k. \end{cases} \end{cases} \quad (4)$$

where τ_k is determined and again from an arbitrary and logical condition
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The effect of complex shape ...

dition $(0.8 + 0.02 \tau_k) \tau_k = 2k\pi$, so that when $A(\tau_k) = 0$, $\tau = \tau_k$, $k = 1, 2, 3, 4, 5$ so that $\tau_1 = 6.724$, $\tau_2 = 12.067$, $\tau_3 = 16.640$, $\tau_4 = 20.992$, $\tau_5 = 24.394$. The analysis has shown that to a great degree of accuracy the amplitude and phase of the oscillator may be said to be established towards the end of the pulse disturbance; between the pulses the oscillations may be assumed to be harmonic and

$$\left. \begin{aligned} x &= x_m \cos (\tau - \varphi_n) \\ \frac{dx}{d\tau} &= -x_m \sin (\tau - \varphi_n) \\ x_m &= \sqrt{x^2 + \left(\frac{dx}{d\tau}\right)^2} \\ \varphi_n &= \tau + \arctg \frac{dx/d\tau}{x} \end{aligned} \right\} \quad (5)$$

hold, where φ_n - the initial oscillator phase until the arrival of Card 3/7

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The effect of complex shape ...

the $(n + 1)$ -th pulse. The evaluations were made on a fast electronic computer, Eq. (3) being integrated by the Runge-Kutta method. The results obtained are given in Table 1 and show that the phase φ_n depends little on μ and γ , γ determining only the number of pulses required for attaining phase φ_n (γ characterizes the external force acting on the oscillator). The obtained values φ_n were compared with the phase ψ of the fundamental of the sequence of pulses $A(\tau)$ and the results are given in Table 2. Finally, if the force acting on the oscillator has the form of bursts of oscillations, whose amplitude and detuning are small and slowly varying, the steady state phase of the oscillator may be determined by the method of P.N. Zavadvorov (Ref. 1: Radiotekhnika, v. 3, no. 2, 1958). There are 2 tables, and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P.W. Fraser, PIRE, v. 45, no. 9, 1957. X

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D201/D504

The effect of complex shape ...

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i
elektrosvyazi im. A.S. Popova (Scientific and Techni-
cal Society of Radio Engineering and Electrical Com-
munications im. A.S. Popov) [Abstractor's note: Name
of Association taken from 1st page of journal]

SUBMITTED: January 5, 1961

Card 5/1

SOV/58-59-9-21044

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 234 (USSR)

AUTHORS: Molchanov, A.P., ~~Gyunninen, E.M.~~, Mel'nikov, A.V., Molchanov, Al.P.,
Myasnikov, L.L., Rysakov, V.N., Skripov, F.I., Filippov, M.M.

TITLE: Results of the Observations of the Solar Eclipses of 1952 and 1954 at
a Wavelength of 3.2 cm

PERIODICAL: V sb.: Polnyye solnechn. zatmeniya 25 fevr. 1952 g. i 30 iyunya 1954 g.
Moscow, AN SSSR, 1958, pp 331 - 332

ABSTRACT: The authors give the results of the radio observations of the solar
eclipses of 25 Feb. 1952 and 30 June 1954. The residual intensities
of the sun's radio emission amount to $< 4\%$ and 0.98% respectively.

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G Y U N N I N E N, E. M.

16(1)
Vsesoyuznyy matematicheskiy s'ezd. 3rd, Moscow, 1956
Trudy. t. 4: Vsesoyuznyy matematicheskiy s'ezd. Doklady
i nauchnyye issledovaniya. Moscow, 1956. 400 p.
Reports of Foreign Scientists. Moscow, Izd-vo AN SSSR, 1959.
247 p. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskii institut.
Tech. Ed.: G.M. Shcherbakov; Editorial Board: A.A. Abramov, V.O.
Boltyanskiy, A.E. Vasiliyev, B.V. Medvedev, A.B. Myshkis, S.M.
Nikol'skiy (Resp. Ed.), A.D. Pochinikov, Yu. V. Prokhorov, K.A.
Rybnikov, P. L. Gl'yazov, V.A. Uspenskiy, M.O. Chatsayev, O. Ya.
Smilov, and A.I. Shifrinov.

NOTE: This book is intended for mathematicians and physicists.
COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the conference by non-Soviet scientists. In those cases when the Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper is printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Belikov, G.I. (Leningrad). V.S. Buldyrev (Leningrad). Quantitative study of the nonstationary diffraction of waves from spherical and cylindrical regions 120
Pavlovskiy, I.Ya. (Moscow). The turning to zero of renormalized charges in theories with point interaction 120
Rumer, Yu.B. (Gyosibirsk). Five-dimensional optics 120
Sviridov, G.A. (Moscow). On the theory of the reflection of elastic waves from a curvilinear boundary 122
Stetsko, V.P. (Moscow). Relativistic mechanics and electrodynamics of continuous media 122
Shchegolev, L.M. (Stalinabad). Singular functions of quantum field theory in n-dimensional pseudo-Euclidean space 124

Card 21/34

GYUNINEN, E.M.; MAKAROV, G.I.

Asymptotic representations of Whittaker functions. Probl.dif.i
raspr.voln. 1:24-62 '62. (MIRA 15:6)
(Ionospheric radio wave propagation)
(Functions, Hypergeometric)

AUTHOR:

Gyunninen, E. M., Makarov, G. I.

S/754/62/000/001/003/006

TITLE:

Propagation of electromagnetic pulse above a spherical earth

PERIODICAL: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln. no 1. 1962. Rasprostraneniye radiovoln. 133-142.

TEXT: The curvature of the earth and its finite conductivity cause the waveform of an electromagnetic pulse to vary during the course of propagation, and the dependence of this variation on the character of the path is of great theoretical and practical interest. Previous treatments of the problem were made under highly simplifying assumptions. In this article the formal solution of the problem of the propagation from a dipole carrying a sinusoidal current turned on at the instant $t = 0$ is evaluated numerically (with a high speed digital computer) and the results obtained are compared with the accumulated numerical data of the stationary theory of radiowave diffraction around the spherical earth in the shadow region. This gives a sufficiently good idea of the extent to which the primary pulse becomes distorted during the course of its propagation. The time variation of the field is investigated

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Propagation of electromagnetic pulse . . .

S/754/82/000/001/003/006

for different types of ground, for different sources to the source, and for different pulse carrier frequencies. Real and also perfectly conducting ground is considered, so that the purely geometrical factor of the earth's curvature can be taken into account.

There is one table and five figures. A. V. Manankov and Yu. I. Kyullenen participated in the calculations. Of the twelve references, the latest English-language ones are by: J. R. Wait (Canad. J. Phys. 35, 1957, 1146; J. R. Johler, L. C. Walters, IRE Trans., AP-7, 1959, No. 1; J. R. Johler, W. J. Keller, and L. C. Walters, National Bureau of Standards, 1956; J. B. Keller and R. M. Lewis, IRE Trans. AP-6, 1958, No. 1.

Card 2/2

GYUNNINEN, E.M.; RYBACHEK, S.T.

Propagation of a radio pulse over a stratified spherical earth.
Probl.dif.i raspr.voln 2:144-157 '62. (MIRA 16:4)
(Radio waves) (Dipole moments)

GIUNNINEN, E.M.; MAKAROV, G.I.; YAGUPOV, I.G.; YANEVICH, Yu.M.

Effect of surface obstructions on the propagation of radio
waves. Probl.dif.i raspr.voln 2:166-211 '62. (MIRA 16:4)
(Electromagnetic waves) (Diffraction)

ACCESSION NR: AT4043149

S/2754/64/000/003/0005/0191

AUTHOR: Gyunninen, E. M., Makarov, V.I., Novikov, V.V., R y*bachek, S. T.

TITLE: Propagation of electromagnetic impulses and of their harmonic components above the surface of the earth

SOURCE: Leningrad. Universitet. Problemy* difraktsii i rasprostraneniya voln, no. 3, 1964. Rasprostraneniye radiovoln (Radio wave propagation), no. 3, 5-191

TOPIC TAGS: radio wave, radio wave propagation, electromagnetic propagation, surface wave propagation, ionosphere, path attenuation

ABSTRACT: The article presents the results of computations of surface wave propagation path properties in the form of graphs and tables with emphasis on the spectral characteristics of the path. The variation in the conductivity and dielectric constant of the earth with frequency is neglected. The multipath character of ionospheric reflections is also neglected by assuming proper gating function at the receiver. In the theoretical section, formulas for the field of a vertical electric dipole, radiating CW energy above a homogeneous or multi-layer flat or spherical earth, are introduced, using the surface impedance approach. Refraction is taken into account by introducing the equivalent radius of the earth. The path

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attenuation function $V(x, y, q)$ for a spherical earth introduced by V. A. Fok (AN SSSR, 1946) is used. It is argued that the availability of tables of the attenuation function for a large number of frequencies enables one to compute the attenuation for an arbitrary signal modulation. After the singularities of the field at the imaginary axis of the complex frequency plane have been separated, a numerical integration method is proposed for evaluation of "transient" spectral components. Three specific examples are worked out in detail: unit step dipole current and sine and cosine dipole current modulated by a unit step function. The first set of curves gives the amplitude and phase as a function of range of the plane earth attenuation function W and spherical earth attenuation function V for ranges from 0-600 km, frequencies from 2 kc-10 mc, earth dielectric constants of 5, 10, 20 and 80 with corresponding conductivities of 10^{-4} , 10^{-3} , 10^{-2} and $1 \text{ (ohm} \cdot \text{m)}^{-1}$. From these curves, a set of curves is generated which gives a plot of range as a function of frequency for constant percentage difference in amplitude and phase of W and V . This set of curves defines the conditions under which a spherical earth model must be used to achieve a prescribed accuracy. For the same set of surface conditions and frequencies the far field values of V (amplitude and phase) are then plotted for ranges up to 10,000 km. The next group of curves illustrates the frequency variation of the parameters t_1 , t_s , t_2 and q of Fok's

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representation of the attenuation function $V(x, y, q)$ as well as the convergence of the series expansion which was used in computation. Two sets of curves of W for transmitter elevations from 0-60 km are given for frequencies of 10-kc and 100 kc and $\epsilon_m = 10$ and $\sigma = 10^{-3} \text{ (ohm} \cdot \text{m)}^{-1}$. Finally, plots of electric field components as functions of time for sine and cosine signals modulated by a step function are given. Tables 1-4 give the values of v , $\arg V$, $\text{Re } V$ and $\text{Im } V$ for ranges from 10-10,000 km and frequencies from 2 kc - 10 mc for the following combinations of the dielectric constant ϵ_m and conductivity σ : $\epsilon_m = 80$ and $\sigma = 1 \text{ (ohm} \cdot \text{m)}^{-1}$, $\epsilon_m = 20$ and $\sigma = 10^{-2}$, $\epsilon_m = 10$ and $\sigma = 10^{-3}$, $\epsilon_m = 5$, $\sigma = 10^{-4}$. Tables 5-8 give the values of the parameter t_s as $\text{Re } t_s$, $\text{Im } t_s$, $|t_s|$ and $\arg t_s$ for values of s from 1-10 and for frequencies from 2 kc-10 mc for the same combinations of ϵ_m and σ . Finally, table 9 gives the value of the field for modulated signal for time t from $10^{-3} - 35 \mu\text{sec}$ and for $\epsilon_m = 20$, $\sigma = 10^{-2}$ and $\epsilon_m = 10$ and $\sigma = 10^{-3}$ for a plane earth and for an earth of 2 layers, one of which is 50 meters thick. The range parameter extends from 10 to 800 km. Orig. art. has: 96 equations, 92 figures and 9 tables.

ASSOCIATION: Leningradskiy universitet (Leningrad University)

Card 3/4

L 28321-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6013085

SOURCE CODE: UR/004B/66/030/004/0698/0700

AUTHOR: Kats, M.L.; Golubentseva, L.I.; Gyunsburg, K.Ye.

ORG: none

TITLE: Activator trapping centers in alkali halide crystals doped with lead ²⁷ Report;
Fourteenth Conference on Luminescence held in Riga 16-23 September 1965 ^{III}

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 698-700

TOPIC TAGS: crystal phosphor, alkali halide, sodium chloride, luminescence, absorption, x radiation, absorption spectrum, excitation spectrum

ABSTRACT: In earlier studies by the authors' group it was shown that x irradiation of lead-activated alkali halide crystals leads to reduction of the usual activator absorption and to the appearance of atomic absorption bands that peak at 254 mμ in NaCl:Pb and KCl:Pb and at 276 mμ in KBr:Pb. It was established that the centers responsible for these new absorption bands are electronic. In the present work there were investigated the spectra of NaCl:Pb phosphor after quenching from 500°C and higher temperatures. This treatment led to the appearance of two new excitation bands peaking at 232 and 328 mμ, while only a band at 328 mμ is evinced in the absorption spectrum. The peak of the luminescence band under excitation in this region is situated at 520 mμ. The intensity of the new excitation bands increases with temperature from which

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ACC NR: AP6013085

the phosphor is quenched. The rate of quenching is also significant. Storage of the quenched phosphors at room temperature leads to decrease in the intensity of these bands and low-temperature anneal eliminates them completely. The spectral characteristics of the investigated NaCl:Pb phosphors are presented in a series of figures illustrating the effect of quenching and of the activator concentration. It was found that if an NaCl:Pb phosphor quenched from 350-400°C is x irradiated and then illuminated for several minutes by appropriate ultraviolet there also appear in its excitation spectrum bands at 232 and 328 mμ. On the basis of the experimental data it is concluded that in quenched crystal phosphors there may exist two types of activator trapping centers: divalent lead ions joined to a cationic vacancy and isolated Pb²⁺ ions. The 232 and 328 mμ excitation bands are associated with $^1S_0 \rightarrow ^1P_1$ and $^1S_0 \rightarrow ^3P_1$ transitions in the isolated divalent lead ions. Orig art. has: 4 figures.

SUB CODE: 20/

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ORIG REF: 005/

OTH REF: 000

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L 28322-66 EWP(j)/EWT(m)/EWP(t)/ETI IJP(c) RM/JD

ACC NR: AP6013086

SOURCE CODE: UR/0048/66/030/004/0701/0703

AUTHOR: Kats, M. L.; Gyunsburg, K. Ye.; Golubentseva, L. I.

ORG: none

TITLE: Spectral characteristics of NaCl:Cu and KCl:Cu crystal phosphors and their water solutions ^{v1} Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 701-703

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, sodium chloride, potassium chloride, absorption spectrum

ABSTRACT: It is known that profound similarity is observed in comparing the spectral characteristics of alkali halide crystals activated by heavy metal ions with their water solutions. For example in the case of Tl^{+} and Pb^{2+} the position of the absorption peaks in the wavelength scale virtually does not change in going from KCl:Tl (KCl:Pb) to the solution. This is explained by the fact that the complexes or quasi-complexes that form in these solutions are linked primarily by ionic bonds; in this case the electron shells of the interacting components essentially retain their individual characteristics. It was deemed of interest to determine whether a like analogy between the spectral characteristics of the crystal and the water solution

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L 28322-66

ACC NR: AP6013086

obtains in the case of introduction of a metal that forms complexes with predominantly covalent bonds. Accordingly, in the present work there were compared the absorption spectra of NaCl:Cu and KCl:Cu crystal phosphors with their water solutions. Here there was not observed agreement between the positions of the absorption bands associated with type I centers. The absorption peaks of type I centers are situated at 254-255 mμ in the case of NaCl:Cu phosphors and at 260-262 mμ for KCl:Cu phosphors, whereas the peak of the absorption band of solutions is observed at 272-274 mμ in both cases. However, upon chilling to about -150°C there appears in the spectrum of unquenched NaCl:Cu crystal an additional band peaking at 272-274 mμ, i.e., coinciding with the absorption band of the solution. Analogous behavior is exhibited by the respective luminescence bands. It is inferred from the experimental data that type II centers, i.e., copper ions lodged in the vicinity of microdefects in the crystal lattice, are responsible for the 272 mμ absorption bands and the luminescence at 485-500 mμ. Water solutions of CuCl with an excess halide ion concentration do not luminesce at all at room temperature, but upon chilling to -140°C emit intense blue-green luminescence. It is concluded from comparison of the spectral characteristics of the respective solutions with the absorption and luminescence spectra of type II centers in NaCl:Cu and KCl:Cu phosphors that at least centers of one kind in these phosphors consist of complexes with predominantly covalent bonds. These complexes apparently form in the vicinity of defects in the crystal lattice. Orig. art. has: 3 figures.

SUB CODE: 20/

SUBM DATE: 00/

ORIG REF: 011/

OTH REF: 003

Card 2/2 CC

89241

S/048/61/025/001/007/031
B029/B067

9,6150 (also 1137, 1395)

AUTHORS: Kats, M. L., Gyúnsburg, K. Ye., and Goulubentseva, L. I.
TITLE: Excitation of luminescence in activated alkali iodides at
low temperature by means of excitons
PERIODICAL: Izvestiya Akademii nauk SSSR . Seriya fizicheskaya, v. 25,
no. 1, 1961, 43-44

TEXT: The authors investigated the spectra of the excitation of luminescence by excitons since new experimental data are required for establishing a theory on energy migration in a crystal phosphor. Alkali-halide iodides were activated with divalent tin and lead ions. The investigation was made with phosphors with a KI and NaI base, whose exciton absorption bands lie in the range about 219 and 229 mμ, respectively. The excitation spectra were taken at +20°C and -150°C by means of a special cryostat mounted in an CΦ-4(SF-4) spectrophotometer which served as a monochromator. Studies of the excitation spectra of KI-Sn crystals showed an excitation band in the range of exciton absorption with a maximum at 219 mμ, and also a strong rise

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Excitation of luminescence...

in its intensity with decreasing temperature (Fig. 1). The rest of the bands are due to activating impurities. Similar bands within the range of exciton absorption were observed in the excitation spectra of KI-Pb and NaI-Sn crystals (Fig. 2). The activity of the bands about 219 mμ for KI and about 229 mμ for NaI increases with the content in activating impurities of the phosphors. In the absorption spectra of tin-activated alkali-halide crystals, the absorption bands of the activator decrease after exposure to X-rays and the intensity of luminescence of these crystal phosphors is reduced. This is due to the formation of non-luminescing atomic centers in tin. The activator bands in the excitation spectra of the potassium of the KI-Sn crystal, additively colored in the vapors, vanished on transition of the ion centers of tin to atomic centers. Simultaneously, the exciton bands of excitation vanished completely. The color of luminescence is the same in the case of both excitation in the activator bands and exciton bands. Changes in the absorption spectra of the crystal phosphor allow to draw conclusions as to the interaction of excitons with activators and thermal microdefects in the crystal lattice. The authors determined the absorption of the specimen before and after irradiation in the exciton band in order to ascertain the change in the absorption spectra of the

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Excitation of luminescence...

KI-Sn crystal phosphors under the action of light from the range of self-absorption. Such an irradiation reduces absorption in the range of the activator bands. In crystal phosphors with divalent activators, interaction processes take place between excitons and activator centers, which excite the luminescing centers and give rise to singly-ionized or atomic centers. This is the reproduction of a lecture read at the Ninth Conference on Luminescence (crystal phosphors), Kiyev, June 20-25, 1960. There are 3 figures and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc.

Card 3/5

L 43912-65 EPF(c)/EPF(n)-2/EPA(s)-2/EWA(c)/EWT(l)/EWT(m)/ENP(b)/T/ENP(t) PI-1/
 Pt-4/Pt-7/Pu-4 LJP(c) JD/JG
 S/0048/65/029/003/0412/0414
 ACCESSION NR: AP5009515

AUTHOR: Kata, M.L.; Gyunsburg, E.Ys.; Golubentseva, L.I.

TITLE: Effect of divalent calcium and strontium ions on the special characteristics of alkali halide phosphors²⁷/Report, 12th Conference on Luminescence held in L'vov, 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 412-414

TOPIC TAGS: luminescence, luminescent crystal, sodium chloride, copper, lead, calcium, strontium
 27 27 27 27

ABSTRACT: The authors have investigated the influence on the luminescence of NaCl:Cu and NaCl:Pb phosphors of introduction of Ca or Sr ions. These phosphors are known to contain two types of luminescence centers, of which one type (here called "type II") involves a lattice defect as well as an activator ion. The addition of divalent ions was undertaken in an effort to increase the concentration of type II centers. This attempt was successful, and it was found that type II centers become the principal luminescence centers in NaCl:Cu:Sr after prolonged

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ACCESSION NR: AP5009515

storage following quenching. Other effects were also observed. In particular, the addition of the divalent ions sometimes resulted in the appearance of a new luminescence band in the vicinity of 500 mμ. This new band appeared only in those cases in which a stable compound of the type $MAlCl_2 \cdot nH_2O$ is possible, where Ak is an alkali metal and Me is a divalent metal, and it is suggested that the luminescence centers responsible for this band may be copper ions at lattice sites with weakened bonds in the neighborhood of a compound of this type. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, 58

NR REF DEV: 008

OTHER: 001

Card 2/2 ¹¹⁸

L 04826-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD
 ACC NR: AP6026971 SOURCE CODE: UR/0051/66/021/002/0188/0191

AUTHOR: Gyunsburg, K. Ye.; Golubentseva, L. I.; Kats, M. L.

ORG: none

TITLE: Absorption and luminescence centers in NaCl-Cu and KCl-Cu phosphor crystals

SOURCE: Optika i spektroskopiya, v. 21, no. 2, 1966, 188-191

TOPIC TAGS: luminescence center, crystal phosphor, alkali halide, *CRYSTAL*
ABSORPTION

ABSTRACT: An examination of data previously reported in the literature shows that the 272-274 nm absorption and 485-500 nm luminescence bands of copper-activated alkali-halide crystals are due to the so-called type II centers. In order to elucidate the structure of these centers, a study was made on NaCl-Cu and KCl-Cu phosphors to determine the relationship between these centers and the possibility of formation of complexes in the phosphors. To this end, absorption spectra of mixed aqueous solutions of CuCl and the alkali metal chlorides (KCl and NaCl) were taken. Comparison of these spectra with the absorption and excitation spectra of NaCl-Cu and KCl-Cu phosphors showed a complete similarity of the spectra of the solutions with the absorption bands of type II centers. If it is assumed that copper complexes with predominantly covalent bonds are formed in the solutions studied, one can deduce from this similarity that at least one kind of type II centers in NaCl-Cu and KCl-Cu crystals consists of complexes with predominantly covalent bonding. The formation of such complexes is

UDC: 535.373.1

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ACC NR: AP6026971

apparently possible in defect sites of the lattice, where ionic bonds are weak. Orig.
art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 13Apr65/ ORIG REF: 011/ OTH REF: 007

Card

2/2

GYUNTER A.

GYUNTER, A.

Some operating requirements of automobile construction. Avt.transp.
32 no.11:28 N '54. (MLRA 8:3)
(Automobiles—Design and construction)

GYUNTER, A., mekhanik

Make tire mileage norms coincide with operating conditions. Avt.
transp.33 no.9:32 S'55. (MIRA 8:12)

(Automobiles--Tires)

YURKOV, Petr Vasil'yevich; PROFERANSOV, D.P., red.; GYUNTER, A.R.,
red.; KASIMOV, D.Ya., tekhn. red.

[What the builder should know about accounting on a construction
project] Chto nuzhno znat' stroitel'iu ob uchete na stroike. Mo-
skva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam
1961. 34 p. (MIRA 15:3)
(Construction industry--Accounting)